Wisconsin Urban & Community Forests
A Quarterly Newsletter of the Wisconsin Department of Natural Resources, Forestry Division

Plant Hardiness Zone Maps

By Jeff Iles
Iowa State University

Reprinted with permission from City Trees, *Society of Municipal Arborists*

Plant hardiness zone maps have been a valuable aid to backyard gardeners and green industry professionals alike, interested in predicting the adaptability of plants (mostly woody plants) to specific climatic regions. Most are isotherm maps of geographic regions based on average annual minimum temperatures experienced at certain weather stations over a period of years. Zone ratings given to plants are meant to indicate excellent overall adaptability. Of course, some plants may "survive" in zones warmer or colder than their designated zones, however, our city residents expect the plants we install to thrive rather than simply survive.

Several hardiness zone maps are currently in use. Some cover relatively small areas such as individual states, while others encompass entire countries. One of the newest maps is a hardiness zone map of China developed by Dr. Mark Widrlechner of the North Central Regional Plant Introduction Station, Iowa State University, Ames, Iowa.

Unfortunately, most of the maps used today do not agree in their numbering schemes and therefore zone numbers relate only to the map used in assigning them. The two most commonly used maps in the United States are the USDA Plant Hardiness Zone Map prepared by the Agricultural Research Service, and more recently, the American Horticultural Society's Plant Heat Zone Map.

Early Hardiness Zone Maps

The first hardiness zone map for the United States was published in 1927, in Alfred Rehder's *Manual of Cultivated Trees and Shrubs*. It divided the US (except for southern Florida) and southern Canada into eight zones characterized by uniform five-degree (Fahrenheit) differences in the lowest mean temperature of the coldest month. By today's standards, the map appears primitive and very general. However, it remained the standard measure for estimating low temperatures until 1938.

Donald Wyman (1904-1993), Horticulturist of the Arnold Arboretum, Jamaica Plain, Massachusetts, using data from a US Weather map for the years 1895 to 1935, redrew the contours of the 1927 map based on average annual minimum temperatures and published it in his book, *Hedges, Screens and Windbreaks* (1938). Although Wyman's new map was published in the second edition of Rehder's Manual (1940), it eventually came to be known as the Arnold Arboretum Hardiness Map, particularly after updates by Wyman and several Arboretum staff members in 1951, 1967, and finally in 1971.

Unlike the original 1927 map, hardiness zones carved out on the Arnold Arboretum map were not based on a uniform number of degree differences. Some of Wyman's zones had 15 degree ranges in the average annual minimum temperature, while other zones had smaller 5 degree or 10 degree ranges. As it turns out, this lack of uniformity among zones of the Arnold Arboretum map provided the impetus for developing the hardiness zone map we use today.

USDA Plant Hardiness Zone Map

The USDA produced its first hardiness zone map for the United States and Canada in 1960. Zones were numbered 1 to 10 with Zone 1, the coldest, in parts of northern Canada, and Zone 10, the warmest, at the southern tip of Texas and Florida. Each zone was based on 10-degree F differences in average annual minimum temperatures.

After one revision in 1965, the USDA issued its most current Plant Hardiness Zone Map in 1990. Like the first map, the 1990 version establishes zones that predict average annual minimum temperatures. Data (lowest temperature readings) used in creating the new map were collected from 1974 to 1986 in the US and Canada, and 1971 to 1984 in Mexico.

Zones 2-10 on the new map have been subdivided into light and dark-colored sections (a and b) that represent 5 degree F differences within a 10 degree F zone. The

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Inside this issue:

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Community Profile:

Tree City USA: Since 2000
Growth Award: 2001
Population: 21,491
Street Miles: 152 (w/o County roads)
Street Tree Population: Approx. 300 within public road rights-of-way
Approx. 7,000 "private-owned" street trees
Park Tree Population: 500 (not including natural areas)
Park Acreage: 350 acres

Program Profile:

Staff:
Mark Slocomb, Mayor
Wayne Delikat, Public Works Director
Craig Anderson, Parks & Recreation Director
Sean McMullen, Building/ Engineering Director
Brian Turk, Planning Director
Tom Zagar, City Forester
Urban Forestry Committee:
Kathy Chiaverotti
Betty Czarapata
Bill Miller
Jeff Musialowski
Nancy Salentine
Ron Wisniewski

Community Profile:

City of Muskego

By Tom Zagar
Lakes Project Coordinator

The city of Muskego is a community of 21,491 located in southeastern Wisconsin, about 20 miles from downtown Milwaukee. Once an unincorporated township, Muskego encompasses a land area of 35.8 square miles. The area was originally home to the Potawotomi tribe who named the area Mus-kee-Guac, or "sunfish" for the panfish that are found in the community's three lakes. In addition to fishing, native Americans hunted a diversity of wildlife found in the wetlands, forests and oak savanna that dominated the landscape.

Following European settlement in the middle 1800's, agriculture became the backbone of the early economy of the community, with produce being shipped to markets in Milwaukee via the Janesville Plank Road. By 1900, most of the woodlands and oak savanna were cleared for farming. With the opening of a trolley line by the Milwaukee Electric Railway and Light Company in 1904, Muskego became a popular recreation spot for Milwaukee residents.

Today, as the population expands, Muskego seeks to maintain its rural character. The recent adoption of several plans is evidence that the environment is seen as a valuable asset. These plans include the Urban Forestry Strategic Plan and Management Plan (1999), a Park and Open Space Plan (2001), a Comprehensive Land Use Plan (2001), and a Conservation Plan (2002).

In 2000, the Muskego Common Council adopted urban forestry strategic and management plans. Written by Ranger Services, Inc., the plans set a course for the management of street and park trees and tree education within the community. The Muskego Urban Forestry Committee was formed to guide the development and oversee the implementation of these plans. To date, this has resulted in the planting of over 130 trees and the pruning of more than 200 trees within city parks. Street tree guidelines have been improved and a tree ordinance has been enacted.

Photo by Tom Zagar

High school students help plant trees on a 3-acre parcel next to their school.

New street trees within Muskego are typically planted by developers, with the trees located on private property within five feet of the road rights-of-way. With the responsibility of caring for these trees placed upon individual homeowners, tree care education for citizens is given a high priority. The city annually offers three tree care workshops free to the community and has held one in-house workshop

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Kishwauketoe Nature Conservancy Builds an Arboretum

by Kim Sebastian
DNR Southeast Region

Kishwauketoe is the Potawatomi Indian term for "sparkling water." The Kishwauketoe Nature Conservancy is a 230-acre natural area in the middle of the village of Williams Bay. Owned by the village, the KNC benefits from a strong volunteer component, and at no expense to tax payers, its friends group has accomplished several successful projects including a shelter, a raised garden, a viewing tower, a 300-foot wetland boardwalk and a wildflower field. The village supports the various projects with staff and equipment. Donations by the Lake Geneva Garden Club, the Lions Club, the Williams Bay Woman's Community Club, Wisconsin Electric and many individuals have made all of these projects possible.

In 2000, KNC turned 10 and the idea of a native tree arboretum was born. Williams Bay applied for an urban forestry grant. Although the application was unsuccessful, the idea for the arboretum hung on. Wanting to connect two forested areas, a field on Harris Road was cleared and mowed. Members of the friends group attended various training sessions. A double deer fence was installed and a 425' x 425' arboretum was started.

Here is where the Lake Geneva Garden Club stepped in. In celebration of the club's 80th anniversary, they chose the KNC arboretum as their Geneva Lake community service project and sponsored 80 trees in the arboretum.

With the help of an urban forestry grant in 2001, there are now over 150 trees representing 32 different native species, including sugar maple, shagbark hickory, blue ash, Kentucky coffeetree, ironwood, quaking aspen and bluebeech, and dozens of native shrubs. A native plant nursery supplied and planted the trees, and provided a two-year guarantee. The trees will not just be left to fend for themselves. Each year, interns are hired and these individuals help care for the trees. The village has provided chips and, fortunately, there is a fire hydrant near the site.

The last phase of the project will include identification of all the trees and shrubs. A local Boy Scout is working on his Eagle Scout badge to have signs made for each species. Open to the public seven days a week from dawn to dusk, thousands of visitors including lots of school children visit the site annually. KNC hosts various community events, including environmental outreach programs. You are invited to visit the arboretum in the KNC, located on Highway 67 in Williams Bay. Trail guides and maps are available at the entrance.

KISHWAUKÉTOE
NATURE CONSERVANCY

Dedicated July, 1990
To the children of tomorrow:
"Theirs is the dower of bird and flower
and theirs is the land and the sky."

Photo by Thor Rasmussen

The site of the future arboretum in the conservancy

Plant Hardiness Zone Maps

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lighter color of each zone represents the colder section; the darker color, the warmer section. Zone 1 represents a region where the average annual minimum temperature is below -50 degrees F. Zone 11 represents areas that have average annual minimum temperatures above 40 degrees F and are essentially frost-free.

When using the USDA Hardiness Zone Map, readers should understand that certain regions at high elevation might bear inappropriate zone designations. There also are island zones (because of elevation differences) that bear a different zone designation because they are either warmer or cooler than the surrounding area. Finally, many large urban areas have been given a warmer zone designation than surrounding cooler rural areas.

AHS Plant Heat Zone Map

In 1997, Dr. Marc Cathey, President Emeritus of the American Horticultural Society, working with the Meteorological Evaluation Service Co. Inc., produced the AHS Plant Heat Zone Map. The 12-zone map estimates the average number of days each year that a given zone will experience "heat days" (days with temperatures exceeding 86 degrees F). This is the threshold temperature at which plants begin suffering physiological injury. The most northern zone, Zone 1, experiences less than one heat day a year, while Zone 12 usually experiences more than 210 heat days.

While not all woody plants have been coded to indicate heat tolerance, the prospect of plant labels providing cold and heat tolerance information will surely benefit professional landscape managers and backyard gardeners. But even with this additional information, it is important to remember, hardiness zone maps are, at best, a rather inexact instrument for predicting plant success. Articulated first in 1927, and a bit more clearly in 1940, Alfred Rehder brought to our attention the importance of microclimate and species preferences for specific environmental conditions.

There are, however, many other factors besides winter temperature which influence the hardiness and growth of certain plants, such as soil, its physical as well as chemical composition, exposure, rainfall, humidity, air drainage and shelter from cold winds. As a rule, one may say that plants stand cold better in a drier situation than in a wet one and that deciduous trees and shrubs generally do well in more exposed situations and in a climate with higher summer temperatures, while evergreen plants prefer a sheltered situation and respond to a more humid climate with less extreme summer and winter temperatures.

At best, zone maps are useful for defining general temperature trends, but their boundaries should not be interpreted as absolute. When working close to a boundary between two zones, choose plants hardy for the colder (or warmer) zone. Select a protected site if marginally hardy plants are used. And of course, always practice proper plant installation techniques and apply appropriate post-plant maintenance measures.

References

Cathey, M.H. 2001. Heat zone map. http://www.ahs.org/publications/heat zone map.htm

Del Tredici, P. 1990. The new USDA plant hardiness zone map. Arnoldia 50(3):16-20.

Rehder, A. 1927. Manual of cultivated trees and shrubs. MacMillan Co., New York.

Rehder, A. 1040. Manual of cultivated trees and shrubs. MacMillan Co., New York.

Wyman, D. 1938. Hedges, screens and windbreaks. McGraw-Hill, New York.

City of Muskego

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for its Public Works and Parks Departments staff. Last year, over 400 middle school students received hands-on instruction on tree planting, and established 15 trees within parks adjacent to their perspective schools as part of a grant-funded project.

In 2002, there are plans to have students plant oak trees in passive-use portions of these parks. Prairie vegetation will then be planted to recreate more than five acres of oak savanna ecotype.

Remaining areas of high quality woodlands within Muskego stand a better chance of preservation through the implementation of the Muskego Conservation Plan. This "Smart Growth" initiative identifies and prioritizes environmentally significant lands within the community and recommends acquisition or management techniques to preserve them. A primary management tool for these lands is the development of *conservation subdivisions*.

As an incentive to preserve larger outlots of natural areas, developers are given an opportunity to subdivide a greater number of residential lots that are of a smaller area than existing zoning would allow. These developments also use more natural landscaping such as planting prairie vegetation around stormwater ponds. Incorporated homeowners associations are required to implement an open space management plan that includes such things as tree preservation techniques and management of invasive species.

For its recent tree management efforts, Muskego has been recognized as a Tree City USA beginning in 2000 and received a Growth Award in 2001. In the face of continued development pressures, trees remain a valued asset to the citizens of Muskego.

Setting Up a Fundraising Task Force

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This is the first of a two-part article on fundraising, adapted from Fundraising for Grassroots Groups *by Ken Wyman. This book, in its entirety, may be downloaded free of charge at: www.GreenAbility.org. Ken Wyman is an international trainer and consultant on fundraising and volunteering, with special interest in environmental causes.*

In the autumn 1999 *Wisconsin Urban & Community Forests* newsletter, the "Steps to Fundraising Success" were laid out. Tasks such as identifying prospective donors, preparing written materials about the organization's past and proposed good deeds, making the funding request, and proper follow-up to seal the deal were discussed. These tasks are all necessary, but if the proper people are not in place to perform them, the process may unravel.

Any organization that hopes to succeed in raising money and awareness of a cause needs a committee or task force specifically responsible for fundraising. The first suggestion is to use the term "task force" in preference to "committee." This may seem like semantics, but the psychology of the words is important. People think of committees as groups that meet indefinitely to formulate recommendations for others to carry out. In contrast, task forces have specific objectives to accomplish within a time limit and are expected to **do** the work, not just talk about it.

A number of key positions or jobs and their roles are listed below. It may take time to develop a full complement of leaders if starting from scratch. Don't let this deter you from starting with whomever you can get first. Others can be added later.

Chair/Coordinator: This should be a pleasant, people-oriented person who can help keep everyone on topic and on time, both during and outside meetings. They should be a good recruiter and knowledgeable enough about the group or organization to provide advice.

Donor Groups Coordinator(s): Often it makes sense to divide potential donors into specialized groups. Examples might include unions, service clubs, businesses, religious groups and foundations. Try to have individuals from each group head up each team. For example, a business may be more likely to give if approached by another well known or highly regarded businessperson.

Special Events Chair: There may be several special events throughout the year. The coordinators for each of these should be on the task force.

Publicity and Promotion Coordinator: One volunteer may be a link to a promotions committee, which supports fundraising through its efforts to obtain publicity for the organization and/or event.

*Power Brokers***:** Include well-connected people who have clout. These people lend their name or make a few important back-room contacts, and they give generously. They open doors and lend credibility to the cause. Use these folks for maximum impact. Don't expect them to come to board meetings or actively serve on committees.

Drones/Workers: These people are task-oriented. Ask them to perform a task and they will. But when they're finished, they stop and wait to be told what to do next. Don't wait for them to approach you—they won't. But if you fail to ask them to do a job that fits their talents, they may be insulted.

Decide Who You Need

Using the above positions, make a list of all the volunteers needed to complete a specific task and prioritize the list, showing who you need first. Next, determine what skills are available among your current group. Volunteer groups are often surprised to discover just the expertise they need among the current or former members of the group. At first, volunteers may not recognize relevant experience from a church stewardship campaign, a union organizing drive or a summer job in sales. They may be ready to take on more responsibility.

Take a Human Resources Inventory

Identify missing elements by taking a human resources inventory. Divide your current volunteers into role types. People may have different involvement potential for different activities. For example, a person with computer experience may be an advisor in that category, but may be a worker in another category. Ask volunteers what role they feel suited for and whether they feel well matched for their assignment. Place them accordingly. Use this information to get a better handle on what types of volunteers are needed for additional help.

Code: (D) Decision Maker (P) Power Broker (A) Advisor (O) Organizer (W) Worker

Person:

Task	D	P	A	O	W

Job Descriptions for Everyone

Job descriptions can help identify the skills needed for each fundraising activity. Written job descriptions are a great recruitment tool. People appreciate seeing their responsibilities in writing, and are more apt to commit time to the group if they know up front what will and will not be expected of them.

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Community Tree Profile:

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Eastern white pine (Pinus strobus)

by Laura G. Jull
Dept. of Horticulture
University of Wisconsin–Madison

Photo by Dr. Laura Jull, UW-Madison

Mature form of the white pine

Native To: North central and northeastern US, southward to Georgia and adjacent Canada

Mature Height: 50–80' or more

Spread: 20–40'

Form: Pyramidal when young, becoming oval to rounded with age; plume-like or feathery in outline; has horizontal to ascending branches

Growth Rate: Moderate to fast

Foliage: Leaves are evergreen, needle-like, slender, very soft and pliable, fine-textured, yellow-green to blue-green; 5 needles per fascicle (sheath), 3–5" long; margins are finely toothed; white stomatal bands appear on the two inner surfaces. Terminal buds are egg-shaped with a sharp point, 1/4" long, resinous, with some scales free at the tips. Stems are slender, smooth, light greenish-brown to gray.

Fall Color: None, as the tree is an evergreen. However, the needles only persist for 2–3 years and are shed from the inner portions of the tree in early fall.

Cones: Distinctive, long, slender, resinous cones that are terminal, pendulous and sticky; 6–8" long, stalked, often curved, with a pointed tip; light brown in color. Cones mature in fall during the second year of cone maturity.

Photo by Dr. Laura Jull, UW-Madison

The persistent white pine cone

Bark: Thin, smooth, olive-green to gray when young, becoming darker with age. Older trunks of trees produce deep, longitudinal furrows with broad, 1"- to 2"-thick, scaly ridges that are dark, grayish-brown in color.

Site Requirements: Easy to transplant; prefers fertile, moist, well-drained soils, acidic to neutral pH, but is tolerant to dry, sandy soils and rocky ridges. Prefers full sun but can tolerate light shade, only when young.

Hardiness Zone: 3a–7

Insect & Disease Problems: White pine blister rust is a serious disease that can eventually kill the tree. The white pine weevil can kill the terminal shoot of the tree's leader, thus seriously deforming the tree. Woolly aphids can also appear on bark and branches.

Suggested Applications: Eastern white pine is a beautiful, specimen evergreen tree. It can be used as a Christmas tree, or a landscape tree in lawns or yards, parks, cemeteries or other large areas. When trees are young, they can be trained and sheared into a hedge. Often has a windswept appearance when sited along coastal shores.

Limitations: Branches can break in strong wind. Intolerant to wet soils, drought, compaction or poor drainage; extremely intolerant of road salt and air pollutants (ozone and sulfur dioxide); can develop chlorosis in high-pH soils. Needles can suffer from winter desiccation, especially when tree is young.

Comments: Eastern white pine is an excellent ornamental conifer and is also an important timber species. Planted in a proper setting, white pine is one of the faster growing pines. It has a wonderful, feathery-looking form with showy, long, pendulous cones. The needles are very soft and can have great ornamental "sound" when high winds blow through the branches.

Common Cultivars or Selections: Numerous cultivars, many of which are dwarf, evergreen shrub cultivars. Some tree cultivars include:
Contorta: irregular, open, pyramidal form with twisted branchlets; trunk is contorted also; 2"- to 3"-long needles; shorter cones; 16–18' tall; often confused with *Torulosa*
Fastigiata: columnar when young, becoming broader to oval with age; ascending branches; 70' tall
Glauca: lighter bluish-green needles; 60' tall
Pendula: graceful, pendulous branches; 15-20' tall
Torulosa: twisted needles and branches; 15-18' tall

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Urban Tree Health Matters:

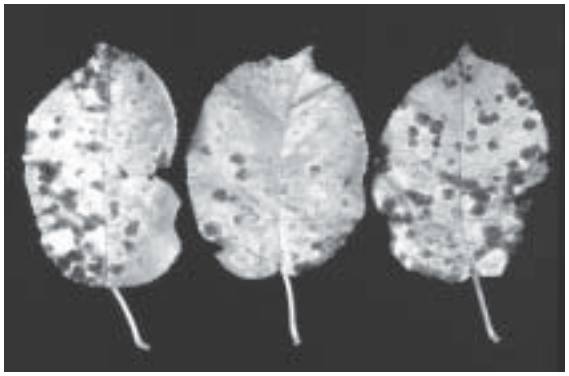
Planting a Crab? Choose Resistance to Scab!

by Glen R. Stanosz, Ph.D.
Departments of Plant Pathology and Forest Ecology and Management
University of Wisconsin–Madison

One of the most commonly encountered leaf diseases of trees in the genus *Malus* (apples) is scab. Some flowering crabapples planted as landscape trees may be severely affected. Scab can result in temporary unattractiveness and longer-term deterioration of tree health. Although various practices can lessen the impact of scab to crabapples, *intelligent crabapple disease management begins when crabapples with proven scab resistance are planted.*

Scab is caused by the fungus *Venturia inaequalis*. This pathogen overwinters in fallen leaves and fruit that were colonized during the previous growing season. In spring, fruiting bodies formed in this litter release spores that are blown about by the wind. Germination of these spores during moist periods is followed by infection of young leaves and fruits. In the resulting lesions, a second type of spore is formed. These secondary spores can be blown or splashed to still other leaves and fruits, followed again by germination, infection, lesion development and additional spore formation. Thus, repeating cycles of disease can occur, with damage rapidly increasing during wet springs and summers. Heavily colonized leaves become distorted and often drop prematurely causing crowns of severely affected trees to appear thin or "transparent." Lesions on diseased fruit become thickened, rough and dark, leading to the disease name "scab." Because symptoms may resemble those of many other leaf and fruit diseases, diagnosis of scab may require submission of a specimen to the Plant Pathogen Identification Clinic in the Department of Plant Pathology, University of Wisconsin–Madison.

A variety of cultural practices can decrease the severity of scab and prolong the useful life of crabapples that already are established in the landscape. Thoroughly raking and destroying fallen leaves and fruit will greatly reduce survival of the pathogen and therefore reduce the number of spores initially dispersed in spring. Overhead irrigation or sprinkling should be avoided. This wets foliage, creating conditions favoring infection and also can spread secondary spores. Thinning or pruning trees in dense plantings also will reduce splash of spores, and



UW–Dept. of Plant Pathology file photo

Leaf disfiguration (above) and subsequent defoliation caused by scab can be prevented by planting crabapples with proven resistance.

additional air movement will help dry leaves to prevent infection.

Fungicides are available to be sprayed on leaves and fruit to protect against infection. The production of secondary spores throughout the growing season, however, means that multiple applications often are necessary for effective control of scab.

Planting crabapples that are resistant to scab can greatly reduce or eliminate the need for cultural and chemical management practices. Comparative trials in many states (including Wisconsin) and anecdotal reports have provided valuable information on the relatively resistance or susceptibility of different crabapples to scab. University of Wisconsin–Extension Bulletin A2173 lists the following selections of scab-resistant crabapples: 'Anne E', *baccata* 'Jackii', *baccata* 'Walters', 'Bob White', 'Donald Wyman', 'Floribunda', 'Golden Raindrops', 'Liset', 'Louisa',

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What Damaged this Tree?

Photo by Cindy Casey, WDNR

Turn to page 15 to find out...

Eastern white pine

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References:

Landscape Plants for Eastern North America, 2nd ed. 1997, by Harrison L. Flint, John Wiley and Sons, Inc., New York.

Manual of Cultivated Conifers, 1985, by Gerd Krüssmann, Timber Press, Portland, OR.

Manual of Woody Landscape Plants: Their Identification, Ornamental Characteristics, Culture, Propagation and Uses, 5th ed. 1998, by Michael A. Dirr, Stipes Publishing, Champaign, IL.

North American Landscape Trees, 1996, by Arthur Lee Jacobson, Ten Speed Press, Berkeley, CA.

The Right Tree Handbook, 1991, by Harold Pellett, Nancy Rose, and Mervin Eisel, University of Minnesota Extension Service, St. Paul, MN.

Trees for Urban and Suburban Landscapes, 1997, by Edward F. Gilman, Delmar Publishers, Albany, NY.

Photo by Dr. Laura Jull, UW-Madison

Immature form of white pine

Planting a Crab?

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'Ormiston Roy', 'Prairifire', 'Professor Sprenger', 'Red Jewel', 'Red Peacock', x *robusta* var. persicifolia, *sargentii*, *sargentii* 'Tina', 'Sentinel', 'Spring Snow', 'Sugar Tyme', and 'WhiteAngel'.

Horticultural characteristics of these crabapples vary, of course. Heights range from less than 15 to taller than 25 feet; flowers may be white to pink; fruit colors range from yellow to orange to red to purple; fruit may drop in fall or persist through the winter; and tree forms vary from weeping to upright to rounded to spreading. This variation allows selection of scab-resistant crapapples for many situations.

Do you want to know more about scab-resistant crabapples? Contact your local UW–Extension office or use the worldwide web to see bulletin A2173 entitled "Crabapple Disorder: Scab" by Karen A. Delahaut, Gayle L. Worf, and E.R. Hasselkus http://cf.uwex.edu/ces/pubs/pdf/A2173.pdf. Other information can be found on the web by searching using the key words "scab" and "crabapple."

(Mention of particular plant cultivars or other materials do not constitute endorsement. Always read pesticide labels and apply in accordance with label directions.)

Coming Events

If there is a meeting, conference, workshop or other event you would like listed here, please contact Dick Rideout at 608-267-0843 with the information."

September 26–28, 2002—Community Forestry at Its Best, Arbor Day Farm/Lied Conference Center, Nebraska City, NE. Contact the National Arbor Day Foundation at 402-474-5655 or conferences@arborday.org.

October 1, 2002—WAA Fall Seminar, Mid-State Tech College, Wisconsin Rapids, WI. Contact Scott Nelson at 608-252-7186 or snelson@mge.com.

October 7–8, 2002—Building with Trees National Conference, Arbor Day Farm/Lied Conference Center, Nebraska City, NE. Contact the National Arbor Day Foundation at 402-474-5655 or conferences@arborday.org.

October 13–16, 2002—Society of Municipal Arborists Annual Conference, Ithaca, NY. Contact Norma Bonham at 314-862-3325, nbonham@mindspring.com or www.urban-forestry.com/index.html.

October 27–30, 2002—Janet Meakin Poor Research Symposium, Invasive Plants—Global Issues, Local Challenges, Chicago Botanic Garden, Congress Plaza Hotel, Chicago, IL. Contact www.chicagobotanic.org/symposia/jmpsymp.html.

November 7–9, 2002—National Arborist Association Tree Care Industry Expo, Milwaukee, WI. Contact Carol Crossland at 603-314-5380 or www.natlarb.com/.

Austree®: Too Good to be True?

by Cindy Casey
DNR West Central Region

REC News, a periodical of Wisconsin's rural electric cooperatives, regularly carries a back-page advertisement for Austrees®. Those tempted by the ads, or simply curious (or skeptical), may have looked for objective, science-based information about this supposed "tree for all reasons." Unfortunately such information is not plentiful, even though the plant has been on the market for more than 25 years. The fifth edition (1998) of Michael Dirr's *Manual of Woody Landscape Plants*, widely regarded as the bible of the horticulture industry, makes no mention of the plant. An Internet search produces everything from high praise to total vilification. According to various university and conservation agency sources, here is some of what is known about Austree.

The Austree is a hybrid willow clone developed through a government research program in New Zealand. The parent plants are *Salix matsudana* (Hankow or Peking willow), native to North China and Korea, and *Salix alba* (white willow), native to Europe and now considered naturalized in the United States.

Austrees are sold as cuttings or bare-root seedlings. Austree Inc. markets the trees and maintains all proprietary rights. There are authorized distributorships around the country. Ordering information is posted on the Rocky Mountain Austree Inc. web site, http://www.rmausa.com/.

All sources indicate that this tree requires a plentiful supply of water. Iowa State University's forestry department planted Austrees in 1990 and those on moist sites have grown very rapidly. Even on comparatively drier sites, the Iowa trees have averaged three to five feet of height growth per year. Iowa State University is also successfully using the trees in streambank stabilization projects. Results from colder or drier climates and on droughtier soils elsewhere in the country have been much less favorable. North Dakota State University's experimental plantings in Dickinson fared poorly and the clone is thus described as not adapted to southwestern North Dakota. Winter dieback has been reported on Austrees from various northern locations. In areas with heavy deer and/or rabbit populations, trees must be fenced to prevent browsing.

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Setting Up a Fundraising Task Force

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Recruit Leadership

Look for certain characteristics when setting up your teams. Try to find people who elicit respect from others and have the power to get tasks done. Seek people with contagious enthusiasm. Along with doers, you need people who can delegate efficiently so as not to overburden any one person or slow others down.

When recruiting people with whom you have not previously worked, do not ask them to take on assignments that last a year or longer. Start with three months or less! This gives you both a chance to decide if you want a long-term relationship. It is much easier to sever the connection with volunteers who are not performing well after a short "trial marriage" than during open-ended terms of office. All *paid* jobs begin with a probation period. So should volunteer jobs.

Talented people may be hard to recruit. Put emphasis on the end results of the fundraising—the community forestry resource or a certain sector of society. De-emphasize the financial target and the difficulties of the work to be done. The volunteers must be excited about what the money will do. If possible introduce the volunteers to past successful projects or people who have gained much through the efforts of the organization and its fundraising. This first-hand exposure will promote understanding and commitment far more than charts, narratives or bar graphs will.

Choose a volunteer's first task carefully. It should lead to quick success. Satisfaction will bring the volunteers back to try again. Pair new volunteers with experienced ones, using a buddy system. The companionship lessens the loneliness of some tasks.

Where to Find Top Fundraising Volunteers

Now that you know what you need people to do, you can start recruiting. Star fundraising volunteers are rare. These types of people have special reasons to be exceptionally good:

- have recently moved to the community
- may run for political office
- are your clients/audience or their families
- have recently retired or graduated from college
- work in sales, media, advertising, public relations or journalism
- volunteer job-description form shows they have prior experience in nonprofit fundraising and have been trained by the United Way, a university, hospital campaign, etc.

Part two will cover what volunteer recruiters should know prior to recruiting, expectations of volunteers, stages of a fundraising campaign and low-cost ways to recognize donors as well as volunteers.

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Urban Wildlife:

Chronic Wasting Disease in Wisconsin — Some FAQs.

by Ricky Lien
DNR Urban Wildlife Specialist

During the time leading to the end of the last century and the much-hyped end of the last millennium you saw a plethora of lists detailing the best of, worst of, most important, most interesting, etc. When we reach the end of the next significant period of time, I predict that near the top of the "Most Significant Events in Wisconsin Wildlife Management" list will be the recent discovery of chronic wasting disease in our whitetailed deer herd. To say this is a big deal is understating its importance. Deer are an immensely important resource in Wisconsin and the state Departments of Natural Resources, Agriculture, Trade and Consumer Protection, and Health and Family Services, along with appropriate federal agencies, are all working to respond to the situation.

The following Frequently Asked Questions come from the Wisconsin DNR web site at www.dnr.state.wi.us/org/land/wildlife/whealth/. More information on CWD is available at this site, as are links to other CWD-related sites.

What Is Chronic Wasting Disease?

CWD is a nervous system disease of deer and elk. It belongs to the family of diseases known as transmissible spongiform encephalopathies (TSE's) or prion diseases. Though it shares certain features with other TSE's like bovine spongiform encephalopathy ("mad cow disease") or scrapie in sheep, it is a distinct disease apparently affecting only deer and related species. CWD occurs in wild deer and elk primarily in northeastern Colorado and adjacent parts of Wyoming and Nebraska. CWD has also been found on elk farms in Colorado, Kansas, Montana, Nebraska, Oklahoma, South Dakota and Saskatchewan.

What Are the Signs of CWD in Deer?

CWD attacks the brains of infected deer and elk, causing the animals to become emaciated, display abnormal behavior, lose bodily functions and die. Signs identified in captive deer include excessive salivation, loss of appetite, progressive weight loss, excessive thirst and urination, listlessness, teeth grinding, holding the head in a lowered position and drooping ears. Many of these signs can also be caused by other diseases known in Wisconsin deer, such as cranial abscessation syndrome, a bacterial disease of the brain or by malnutrition. CWD is a slowly progressive disease; signs are usually not seen until the animal is 18 months of age or older.

How Is CWD Transmitted?

The mode of transmission between deer is not completely understood. It is thought that the disease can be passed between animals in a herd and also perhaps from mother to offspring. The prion that causes the disease is an abnormal version of a protein that normally occurs in the animals' cells. It is not easily killed by environmental factors, heat or disinfection, so transmission from a contaminated environment may also be possible.

How Is CWD Diagnosed?

Brain samples are collected from hunter-harvested or other dead deer and are examined microscopically using special stains to identify the CWD prion. A research team in Colorado has recently developed the first live animal test for CWD, based on the collection of tonsil samples for microscopic examination. This test seems to work well in deer, but not in elk.

What Do We Know about CWD in Wisconsin Deer?

Since 1999, a comprehensive monitoring program has been in place to test Wisconsin deer. All CWD tests performed in 1999 and 2000 were found to be negative. The Wisconsin Department of Agriculture, Trade and Consumer Protection and Wisconsin's deer and elk farming industry are cooperating on a voluntary CWD surveillance program for farmed animals. Currently 44 farm-raised elk herds are enrolled and over 100 elk have been tested, all of which have been negative.

Three CWD-positive deer were identified from sampling done during the 2001 Gun Deer Season. All three deer were harvested from Dane County, Deer Management Unit 70A. All three were bucks 2.5–3 years of age. Efforts were initiated to sample 500 additional deer from the vicinity of where these three initial CWD-positive deer were found. Additional CWD-positive deer were discovered and wildlife management professionals are considering what management options are appropriate.

Is CWD Transmissible to Humans?

CWD has been known to occur in deer and elk in the USA for decades. In spite of ongoing surveillance for similar disease syndromes in humans, there has never been an instance of people contracting a disease from

butchering or eating meat from CWD-infected animals. A World Health Organization panel of experts reviewed all the available information on CWD and concluded that there is no scientific evidence that CWD can infect humans. However, there is much that scientists still do not know about CWD, and one cannot state that transmission of CWD to humans is absolutely impossible.

Is It Still Safe to Eat Venison from Wisconsin Deer?

There is no scientific evidence that CWD is transmissible through consumption of meat from an infected animal. CWD has not been linked to the human TSE disease, Creutzfeldt-Jakob disease, in the way that cattle BSE has been in Europe. The prion that causes CWD accumulates only in certain parts of infected animals—the brain, eyes, spinal cord, lymph nodes, tonsils and spleen—therefore, these tissues should not be eaten. Health officials additionally advise that no part of any animal with evidence of CWD should be consumed by humans or other animals. Experts suggest that hunters take simple precautions when field dressing deer in areas where CWD is found:

- **Wear rubber gloves** when field dressing carcasses.
- **Bone out the meat** from your animal.
- **Minimize the handling** of brain and spinal tissues.
- **Wash hands and instruments** thoroughly after field dressing is completed.
- **Avoid consuming** brain, spinal cord, eyes, spleen, tonsils and lymph nodes of harvested animals. (Normal field dressing coupled with boning out of a carcass will remove essentially all of these parts.)
- **Request that your animal be processed individuall**y, without meat from other animals added to meat from your animal.

What Should I Do If I Observe or Harvest a Deer That I Suspect Might Have CWD?

Call the local DNR office or the DNR Wildlife Health Team (608-267-6751, 608-221-5375) right away. The DNR will make every effort to collect samples from the possibly affected deer for CWD testing.

What Will Be Done to Manage CWD in Wisconsin Deer?

The DNR is working with other state agencies and the USDA to gather all available information about the CWD-positive deer identified in Dane County and all other deer tested in that area and the rest of the state. We are planning immediate additional sampling of deer from the affected and adjacent regions and will be discussing the best methods to control and eradicate CWD from Wisconsin's deer. The monitoring program for CWD will continue to need the assistance of hunters statewide who volunteer to have their deer sampled at registration stations. The DNR also will continue to work with state animal health authorities to learn more about the CWD status of farmed deer and elk in the state, and to control mixing of farmed and wild deer and elk.

Is CWD a Risk for Wisconsin's Livestock?

There is no evidence that CWD can be transmitted under natural conditions to cattle. CWD has been a problem in farmed elk in several western states, but has been documented to date only in one deer, on one deer farm in Wisconsin.

Austree: Too Good to be True?

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As with any non-native species, Austree's potential for ecological invasiveness must be evaluated. Austree is reportedly a male clone, hence it should be seedless. According to Austree Inc., the plant does not spread via suckering, however Montana State University Extension reports that it "suckers freely." Iowa State University reports that it does not. In Australia, where there are no native willow species, most willows, including all *Salix matsudana* x *Salix alba* clones, have been declared by the government to be pest plants. Although the primary concern with these plants in Australia is seed production, willows planted in riparian corridors in that country have spread via rooting of detached branches, leading to river channel obstruction. DNR's invasive plant specialist, Kelly Kearns, knows of no such unintended vegetative reproduction of Austrees in the Midwest.

There are serious concerns over pest problems with the Austree. UW–Extension's Plant Disease Diagnostics Clinic reported black canker, a potentially fatal disease, on an Austree sample in August of 2001. Iowa State University has also reported black canker as well as leaf blight on Austree. According to University of Wisconsin Woody Ornamental Extension Specialist Dr. Laura Jull, a campground near Kewaunee planted with several hundred Austrees experienced the sudden loss of over 70 percent of them several years ago due to canker disease. Dr. Jull estimates the useful life of Austrees in Wisconsin to be no more than 10 to 15 years. In the *Manual of Woody Landscape Plants*, Dirr notes that "the use of any willow should be tempered with the knowledge that serious problems do exist. Many are short lived and require much maintenance to keep them presentable. All are fast growing and somewhat weak wooded."

Although there may be some sites in Wisconsin where Austrees will perform acceptably well, the preponderance of evidence appears to suggest that potential problems with the clone likely preclude any wholesale use of this plant in our state.

Organization Profile:

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Planting Trees on Wisconsin's State Roadsides

by Leif Hubbard
Wisconsin Department of Transportation and
Alice Connors
Chilton Tree Board

This is a story of a tree seedling's hopes and dreams of growing up to become a tree on one of Wisconsin's highway roadsides. Before you proceed, you are warned this is a story of mystery, suspense, curves and hills and is not intended for the faint of heart.

The story opens with the tree seedling just sprouting and poking its head out of the plant medium in the greenhouse, thinking, "What do I want to be when I grow up? I know, I want to be a highway tree." At this point we leave the seedling, since it has a few years of growing to do and must be transplanted before fulfilling its life's ambition of becoming a highway tree. We now go to another place where the seedling's destiny is already being decided—the Wisconsin Department of Transportation (WisDOT).

As with many things, on the surface it appears that planting a tree on the highway right-of-way (roadside under WisDOT control) is a simple thing to do. However, as with most things, after delving deeper it's anything but simple.

The best conditions under which to plant a tree on a highway roadside occur during the highway development process. This is when, biologically speaking, the tree will have the greatest chance of success, with a plant establishment period built into the contract. There are a few other opportunities for planting trees, including during the routine highway maintenance process, but opportunities here are very limited and a plant establishment period isn't available.

In order to get our seedling from the nursery to the roadside, one needs to have an understanding of the highway development process. Most think that the highway design stage (final design) is the time to start talking about planting trees. It isn't. Highway final design is only one element in the overall highway development process. Final design occurs in the middle of the highway development process, linking the preceding stages of planning and project development with the subsequent stages of right-of-way acquisition, construction and maintenance.

It is during the first two stages—planning and project development—that citizens, communities, and WisDOT planners and programs working together can have the greatest impact on the highway development process. If our seedling is to realize its dream of becoming a highway tree, it needs to be considered during the planning and project development stages. The fact is, opportunities for a tree to make it into the highway development process during the final design phase are limited due to all of the decisions made at the earlier stages. Resources (including money) are programmed during the project development stage, and if no money is programmed, there will be no tree.

So what is a citizen to do?

1. Check to see if a highway development project (Major, Expansion, Reconstruction, Reconditioning) is planned for the area you're interested in. Check out this web page for highway development information: www.dot.state.wi.us/dtim/bshp/six-d3.htm.
2. Check to see if WisDOT has jurisdiction over the highway you're interested in. If the highway is numbered, it's a WisDOT road. If it has a letter or name, other levels of government have jurisdiction over the road.
3. Have a general understanding of WisDOT's highway development process:
   PLANNING → PROJECT DEVELOPMENT → FINAL DESIGN → RIGHT-OF-WAY → CONSTRUCTION
4. Make WisDOT district directors, planners and project programs aware of your concerns/needs. The web page for district directors is: www.dot.state.wi.us/dtd/hp-contact.htm.
5. Follow the project through the entire highway development process. The life of a project is outlined at the following web page: www.dot.state.wi.us/dtd/hp-life.htm.

PLANNING: Every two years WisDOT develops the outer two years of its six-year plan. This is the best point at which to become aware of what WisDOT plans to do five and six years from now. ***This is the ideal time to plant the seed that trees are needed on a project.***

PROJECT DEVELOPMENT: During this stage, money is programmed for all elements of a project. ***This is the time to ensure that funding for planting trees is programmed.*** There are very limited financial resources available for trees. Because of this, limited priority has been given to tree planting by WisDOT. Trees are only planted when:

1. the trees replace existing trees which are removed due to construction
2. the addition of new trees improves safety and/or promotes good neighbor relations

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The Idea Exchange...

compiled by John Van Ells
DNR Southeast Region

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Does your community or organization have an idea, project or information that may be beneficial to others? Please let your regional urban forestry coordinator know. We will print as many of these as we can. If you see ideas you like here, give the contact person a call. They may be able to help you in your urban forestry efforts.

Urban Forestry Courses On-line

Thanks to the foresight of educators at two outstanding schools, Utah State University and Clemson University, there are now two *Urban and Community Forestry Courses* available through the Internet. Information can be found at the TreeLink website. The TreeLink banner ad contains a link to both on-line courses. If the ad isn't there when you first enter the web site, click your Refresh button until they revolve into place.

TreeLink has posted information on these and more resources, with a list of 70 schools offering courses in Natural Resources and Community Forestry. *Info: www.treelink.org.*

American Forests Unveils National Urban Tree Deficit

The *National Urban Tree Deficit* is the number of "average urban trees" we need in metropolitan areas to bring the tree canopy level up to American Forests conservative recommendations. The recommended level was determined after studying existing tree cover in urban landscapes for 20 years, measuring existing tree cover using image analysis techniques and working with local urban foresters. The recommended levels are adjusted for local climates. The core recommendations are:

- 15% for commercial areas
- 25% for urban residential
- 60% for suburban
- 40% on average

The plains states and the dry western states like Colorado will have city landscapes with lower recommendations. For example, the average tree cover for the Denver metro area was 25%.

Within urban areas of the 48 contiguous states, American Forests estimated the area of forest cover using classified satellite imagery. The urban areas were then segmented by region to adjust for variation in natural forest cover. Computing the recommended tree cover based on regional target values they calculated the difference which was the total deficit area. Dividing the total deficit area by the area of an average urban tree they came up with 634,407,719 trees. It was all very scientific. *Info: Visit American Forests at* www.AmericanForests.org *to learn what you can do.*

Urban Tree Ordinance Index

One of the more effective tools used by communities to conserve and improve their urban forests is the tree ordinance. Often they are enacted in response to changes from rapid land development. Tree ordinances range in complexity from simple tree replacement standards to more comprehensive ordinances addressing natural resource issues.

When developing a tree ordinance, it is very important that the ordinance meet the needs of the community. Beware of copying any ordinance that was successful in one community because different communities have different needs and therefore require a different type of ordinance. One of the best reference materials on writing tree ordinances is the publication, *Tree Conservation Ordinances*, written by Chris Duerksen, and distributed by the American Planning Association *Info: Access the complete index of ordinances at* www.urbanforestrysouth.org/index.htm.

WalMart Environmental Grants

Each *WalMart* store has an allocation of money for environmental grants to nonprofit organizations and schools to support environmental efforts and education in communities where stores are located. Grants are in the $2500 range. More than $1.5 million was granted nationwide last year. Grant applications, accepted on an on-going basis, are available and submitted through your local store, but decisions are made in Arkansas. WalMart also gives grants under the categories of community, children and education. *Info:* www.walmartfoundation.org/.

Rubber Sidewalks Put Local Governments on the Right Path

In California they are testing rubber sidewalks to replace concrete when tree roots expand and push up and crack concrete sidewalks. Super*Flexx™ Paver Tiles* are made to last from very high density, urethane-bonded primary crumb rubber buffings. According to the manufacturer, SuperFlexx™ looks great and it has a distinct traction advantage over similar smooth-top spike proof materials. At 3/4", the tiles retain a cushion-like effect that is easy and non-fatiguing upon one's feet. Extremely easy to maintain, just hose down or damp mop and let dry.

Applications include: restaurant patios, residential backyard patios, decks, walkways, slip hazard areas, restrooms, wet bars, sports arenas, courtyard locations and numerous areas around golf courses. *Info:* www.usrubber.com.

Council News:

Council Members Appointed, Activities Planned

by Chris Giese
Council Chair

This is my last Council News article. My time as council chair has gone by very quickly. Jeff Edgar of Silver Creek Nurseries has been vice-chair of the council for the last two years and will assume chair responsibilities after the next meeting. My thanks to the entire council for making my time served memorable. I learned a lot and enjoyed it, and hope to remain active in the council.

Our nominating committee has been seeking out new representation to enhance the council's voice in forestry. The council identified the Wisconsin Chapter of the American Society of Landscape Architects (WASLA) as an important component and major player for the council. Ken Keeley has stepped up to the plate and accepted membership. Ken is currently secretary and president-elect of the Wisconsin ASLA.

Bob Skiera is resigning from the Governor's Council on Forestry and the urban forestry council has recommended that Ken Ottman take his place. This will ensure continued urban forestry representation at the top level of state government.

Heather Mann was present at the October meeting and enlightened the council with a presentation on the Urban Open Space Foundation (UOSF). On November 6, 2001, 14 states approved $905 million in funding for parks and open space. Despite news of a weakening economy the approval rate for the measures was 73 percent—proving once again the Americans are willing to pay for parks and open space. The vision of the Community Open Space Foundation is to improve the biological, economic and social health of communities through innovative park systems and land-use reform. Heather explained that the organization is a 501(c)(3) charitable organization. One of her current projects involves a concept for a downtown "Central Park" in Madison. After Heather's presentation, the council expressed strong interest in taking a proactive role in this organization. A motion to have a member of the UOSF on the council was passed and Heather accepted. Heather also spoke at the annual urban forestry conference in January, 2002.

The council will be hosting another Tree City USA banquet on March 27, 2003. The event will be held at the Monana Terrace in Madison. The council is actively planning the event. Details will follow as time gets closer.

Planting Trees on Wisconsin's State Roadsides *continued from page 12*

In addition, planting for aesthetics is allowed only with high-level WisDOT approval and then only if federal or local funds are available.

Even if you are successful in incorporating trees in the planning and project development stages, the trees can fall out of the project during any of the subsequent stages. To prevent this, citizens need to stay involved throughout the entire project development process.

Now back to our seedling—will it find success? For the most part, it is up to the citizens of the state of Wisconsin. If our citizens believe that trees add value to the roadsides, and if they take action to have trees included in Planning, Project Development, Final Design and Construction, our seedling will find success.

What follows is a real example of how the city of Chilton and the Wisconsin Department of Transportation worked together to develop a tree plan for a four-lane highway project through the city.

When the first meetings were being held with the WisDOT late last year, there was strong opposition to the expansion of Highway 57 to a four-lane highway going through the city. Many of the street trees along the current highway are at least 100 years old and create a beautiful canopy of foliage. At least 14 of these large trees needed to come down because they were in the way of construction.

Mayor William Engler immediately got the tree board involved to work with the residents and WisDOT to save the trees where possible and to determine what could be offered to the residents when trees had to be removed.

Representation from the tree board was included at all construction meetings from the get go. Tree board members were charged with landscaping and trees, and met monthly with WisDOT and the public works committee to plan for the new construction.

The first thing the tree board did was survey the property owners involved, getting their opinion on landscaping, whether they wanted their trees replaced, and for those trees that could be saved and were near terraces, whether the homeowners wanted them boxed in or not. Homeowners were also given an option to have overmature trees removed. A total of 24 surveys were returned involving 32 parcels of property—a good return!!

continued on next page

Urban Forest Resources:

compiled by Cindy Casey
DNR West Central Region

Utilizing Municipal Trees: Ideas from across the Country, by S.M. Bratkovich, October, 2001.

Using case studies from around the country—including Wausau, Wisconsin!— this publication seeks to inspire local governments and businesses to undertake various "value-added" municipal tree utilization projects. Community tree managers facing the financial burden of waste wood disposal should find this an extremely useful reference. Published by USDA Forest Service, Northeastern Area State and Private Forestry, St. Paul, MN. 91p. The publication is currently available on-line at www.na.fs.fed.us/spfo/pubs/misc/umt/index.htm. Alternatively, single copies may be requested by contacting the USDA Forest Service, 1992 Folwell Ave., St. Paul, MN 55108; 651-649-5262. Mention publication number NA-TP-06-01.

Compatible Tree Factsheets for Electric Lines and Restricted Spaces, Including Evergreens for Screens, 2nd ed, H.D. Gerhold, N.L. Lacasse and W.N. Wandell, eds, 2001.

Here's another great tree selection guide from Penn State by the same folks who produced *Street Tree Factsheets*. Full-color photographs accompany descriptive profiles of over 40 low-growing species suitable for use under power lines or for evergreen screens. Many new cultivars are included. This very useful reference is for anyone in temperate zones of North America involved with replacing trees under electric utility wires. Single copies cost $18 (includes shipping) and may be requested from the Municipal Tree Restoration Program, 109 Ferguson Building, University Park, PA 16802; 814-865-3281; Hdg@psu.edu.

Planting Trees on Wisconsin's State Roadsides *continued from previous page*

The tree board surveyed the properties where trees needed to be removed. Later a letter was sent to each of these property owners explaining the situation. The letter also gave homeowners the choice of replacement tree species, either a Homestead elm or Greenspire linden (both beautiful trees). Each board member was given the names of several property owners to meet with. Board members explained that the trees would be replaced at no expense to the property owner. Generally speaking the property owners were satisfied about getting trees replaced, but still apprehensive about the four-lane highway.

Working with the director of public works, who then consulted with WisDOT, the tree board finally received a commitment that trees would be replaced, the tree board would be involved in all tree-related decisions and property owners would be involved with the placement of their new trees.

The key is to work with WisDOT right away when a new road project is being planned. The tree board did not take a back seat and constantly repeated at the meetings that they wanted the trees replaced with large, hardy trees (no seedlings).

Construction is scheduled for 2004, and hopefully when all is completed we will have beautiful trees to replace the old ones that were taken down. The tree board also made recommendations about landscaping and decorative lighting that will complement the whole project when completed. Remember, get involved right away and don't take "no" for an answer where trees are involved.

It is the board's goal to have a new canopy of trees lining the new street for years to come, creating a beautiful gateway to the city of Chilton.

Now Available—

New Tree Planting Brochure

This brochure walks you step by step through the tree planting process. The brochure includes: what to consider before planting a tree, hardiness zones, types of nursery stock, seven planting steps and caring for your new tree (watering, mulching and pruning).

Copies are available from your regional urban forestry coordinator (see page 16) or by writing: DNR Forestry, PO Box 7921, Madison, WI 53707. Ask for "New Tree Planting," publication number FR-184-2001. A color version in pdf format is also available on the DNR urban forestry web site at: www.dnr.state.wi.us/org/land/forestry/Publications/INDEX.HTM#ucf.

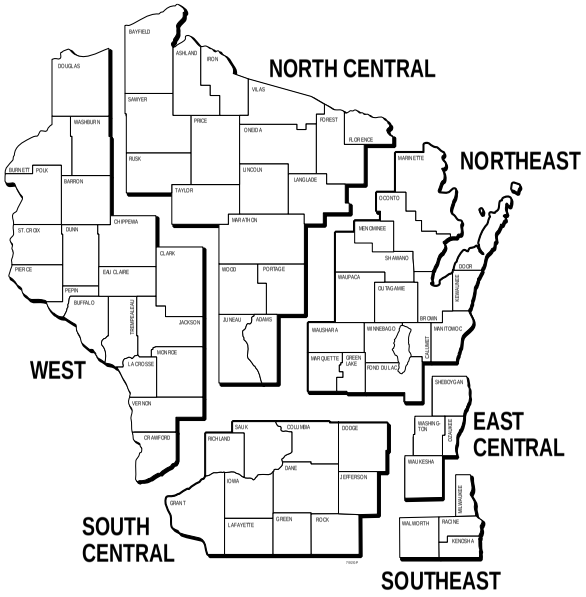
From page 7.

What Damaged this Tree?

Answer: A homeowner was trying to prevent the forked limb from splitting further and resorted to a cable. Good thing they "fixed" the boo-boo with pruning sealer!

Do you have pictures of tree damage others ought to know about? Send them to Kim Sebastian (address on page 16) and we'll print them here!

Wisconsin DNR Urban and Community Forestry Contacts



World Wide Web Site: http://www.dnr.state.wi.us/org/land/forestry/uf/

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